

color. Abundant in Muskeget Channel at a depth of from three to five fathoms.

#### ECHINODERMS.

11. *ASTERACANTHION FORBESI*, Desor. Rays about two and a half times as long as the disk is broad. Differs from *A. rubens* in its more cylindrical rays, and in its spines, which are not pointed, but obtuse and canaliculate along the avenues. Color reddish brown. Dredged from a depth of eight fathoms in the Vineyard Sound.

12. *ASTERACANTHION RUBENS*, Müll. Found at all depths, from low water mark to twenty-five fathoms.

13. *ASTERIAS SPONGIOSA*, Fabr. Frequent among barnacles, at depths of from five to fifteen fathoms.

14. *OPHIOCOMA ACULEATA*, Müll. Frequent among barnacles, at the same depth as the preceding species, and commonly associated with it.

15. *ECHINARACHNIUS PARMA*, Rumph. Found in great quantity among the Shoals of Nantucket, at an average depth of from six to twenty fathoms. Of a bright red color, but turns green after death. *E. atlanticus*, Gray, is nothing but a young individual of this species.

16. *ECHINUS GRANULATUS*, Say. Found scattered at all depths from low water mark to twenty-five fathoms. Of a beautiful green color at the greatest depths.

17. *SIPUNCULUS BERNHARDUS*, Forbes. Frequent in the Vineyard Sound, at the depth of from six to twelve fathoms. Found generally in the shells of *Buccinum trivittatum*, Say, which are very common in this locality, at that depth.

18. *CUCUMARIA FUSIFORMIS*, Forbes. But one specimen was found, white, tinted with pink on the back. It was dredged near South Shoal, from a depth of twenty-two fathoms.

Mr. Desor described also two new species of Sponges.

19. *SPONGIA URCEOLATA*, Desor. Cup-shaped, with a lobated margin; perforations very minute. Diameter 1 inch. It is of a

bright red color, but turns black after death. Dredged in the harbor of Edgartown, from a depth of four fathoms.

20. SPONGIA SULPHUREA, Desor. A large species, massive, variously crooked and bent, often annular. Surface covered with many scar-like impressions, at the bottom of which are seen small perforations. It is of a bright yellow color when alive, like sulphur, but turns black after death. Found in great abundance in the Vineyard Sound at a depth of from six to ten fathoms, attached to stones or old shells.

Among the twenty species here enumerated, nine only are mentioned in Gould's Report on the Invertebrata of Massachusetts, seven are entirely new, and four have not been found before on this side of the ocean. Most of the species seem to be exclusive inhabitants of the deep waters, with the exception of the two very common species of Echinoderms, (*Echinus granulatus* and *Asterias rubens*,) which are found at all depths.

Mr. Desor offered for the acceptance of the Society, the original specimens of the above-described species.

Mr. Burnett read a long and interesting paper on the "Hibernation of Insects, and its relation to their Metamorphoses." After some preliminary remarks on the relations of the functions of animal organisms to the season of the year, and the laws regulating the phenomena of hibernation, he came to the consideration of these laws as particularly manifested in the economy of insects. In the course of his observations this autumn upon the *Noctuidæ*, he had noticed that the ova of one species, *Clisiocampa americana*, the common Tent Caterpillar, instead of remaining all winter, as has been supposed, exposed to the cold and storms in an undeveloped state, begin at once to undergo the embryonic changes. He found in every egg which he opened, a young caterpillar with the vitelline sac attached to it, the vitelline duct entering upon the back. He had observed the same thing in several other species of *Noctuidæ*, and therefore infers its probable existence in all. He